PUBLIC TRUST ADVISORS

Introduction to Credit Research

Perspectives on Corporates and Banks

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Agenda

Learning Objectives

- Learn what fundamental analysis entails and how it is used to inform the investment process.
- Gain an understanding of how fundamental analysis is conducted on nonbank companies.
- Look at how credit analysis is conducted on banks using the CAMELS framework.
- Learn how fundamental analysis is different than market-based analysis and the drawbacks of using just a market approach.

What is Fundamental Credit Analysis?

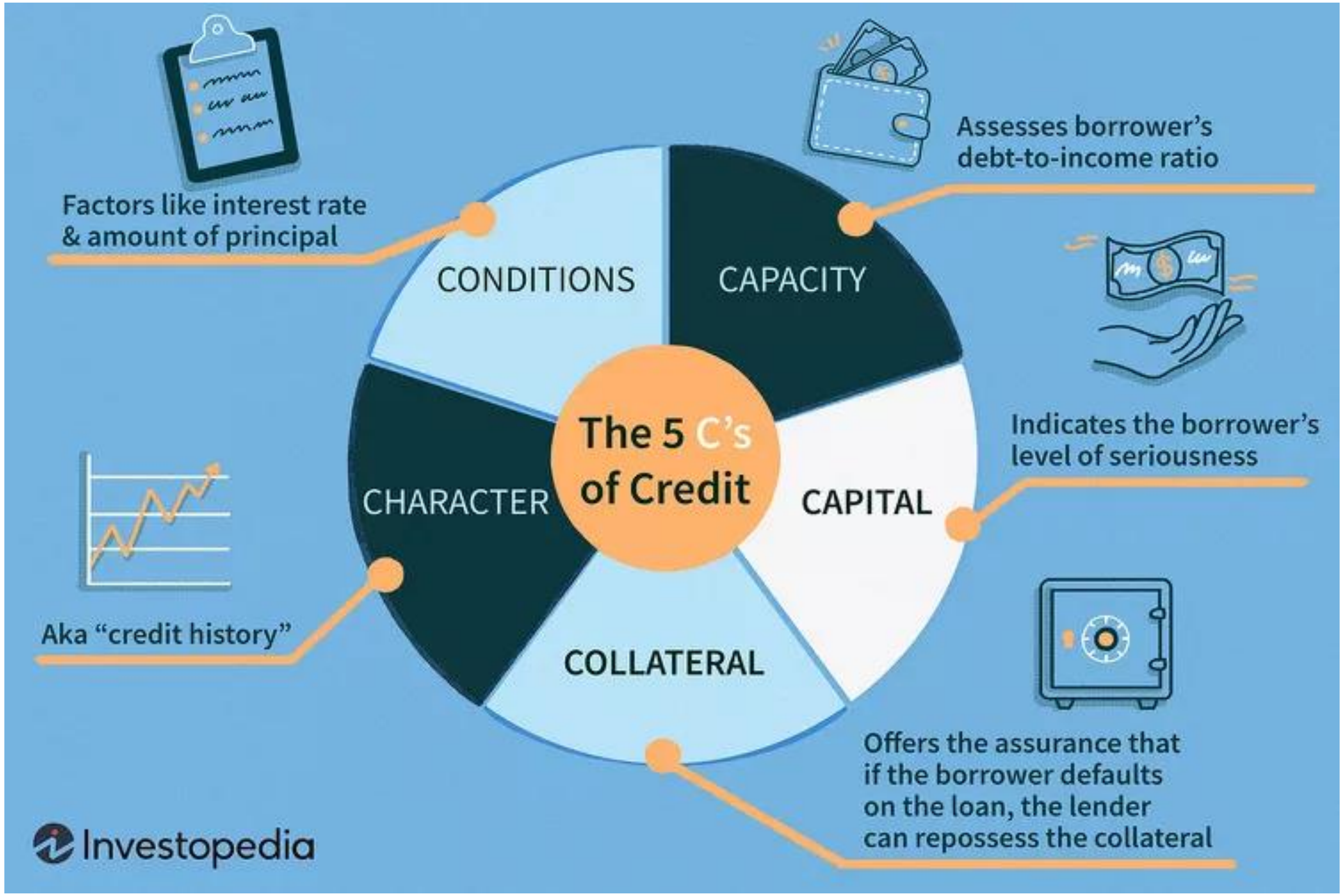
- Fundamental analysis attempts to develop insight by looking holistically at a business to determine its credit quality and potential risks.
    - Analyze the three financial statements (Income Statement, Balance Sheet, Cash Flows)
    - Look at the competitive environment and profit drivers (Porter's 5 Forces, Peer Analysis)
    - Utilize specific credit ratios to form an opinion on credit quality (leverage, cash flow, interest coverage)

- Develop an understanding of rating process to anticipate rating changes before they happen.
    - Speak with Nationally Recognized Statistical Rating Organization (NRSRO) analysts to understand thinking and process.
    - Analyze rating triggers to determine whether an issuer will breach them.
    - Both positive and negative migration present opportunities.

Corporate Credit Analysis (5 Cs)

Corporate Credit Analysis (The 5 C's)

- Character
- Capacity
- Capital
- Collateral
- Conditions



Character

- Character
  - Refers to a company's willingness to pay back debts.
  - Considers things like prior defaults, management, subordination of debt.

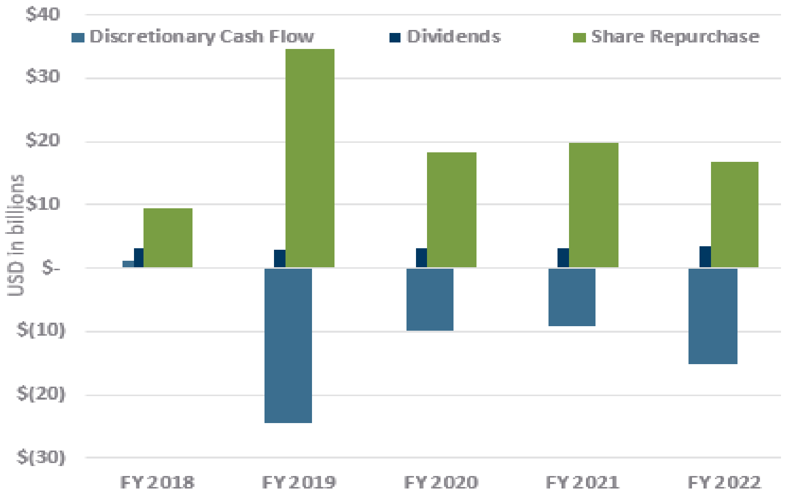
- For investment grade (IG) - companies' default is not usually the biggest concern. We look at how management teams prioritize excess cash flow to judge "character."

- For example, a company using debt or excess cash to repurchase shares shows that the management team favors equity holders over debt holders.

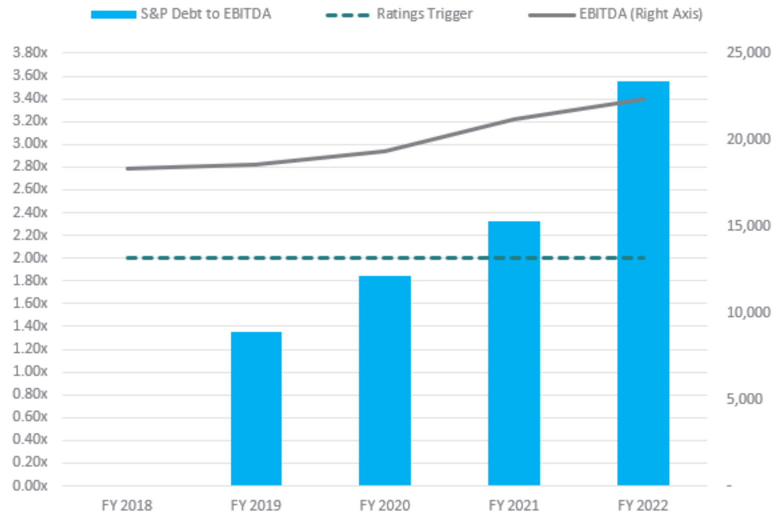
Character: Oracle Corp. Example

- In 2019, Oracle began repurchasing significant amounts of stock at the direction of its CEO, Larry Ellison.

- Repurchases in 2019 amounted to $34.50 billion which was ~3x higher than the prior year and used up the company's excess cash balance resulting in a "net leverage position" for the first time in years.



Source: Bloomberg LLC, Public Trust Advisors



Source: Bloomberg LLC, S&P Cap IQ, Public Trust Advisors

Character: Oracle Corp. Example (cont.)

- From 2019 onward, Oracle repurchased between $16 to $20 billion of shares each year. We call this a "transfer of risk."
    - Oracle's management team was weakening the company's credit profile in order to provide better returns for equity investors.

- The increase in repurchases led to a one-notch downgrade at S&P in July 2019 and another in June 2020. Throughout the process, Oracle would not give guidance on the level of repurchases which left debt investors and rating agencies in the dark.

- Finally, after formally breaching S&P's leverage trigger in 2021, Oracle would go on to receive two more downgrades before settling at "BBB."

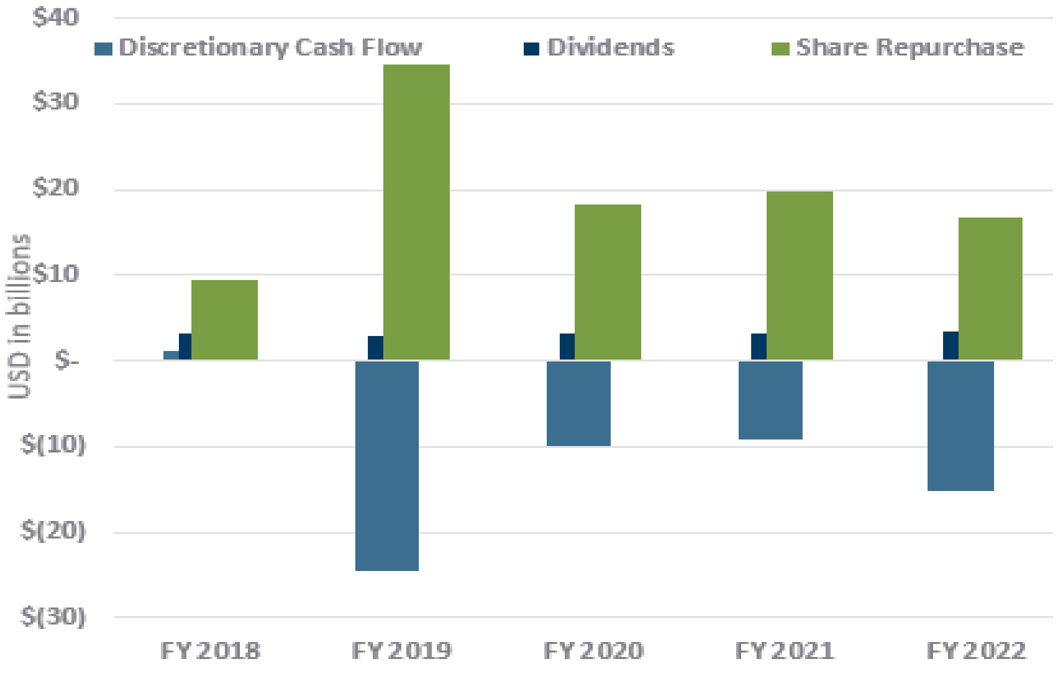
Capacity

- Capacity refers to a company's current level of debt and its ability to take on more.

- We look at three main metrics to judge capacity.
    - Leverage = Net Debt/EBITDA
    - Interest Coverage Ratio = EBIT/Interest Expense
    - Discretionary Cash Flow = Free Cash Flow (FCF) - Dividends - Share Repurchases

- If we know what leverage number will trigger a downgrade, it can help us determine how much additional debt a company can take on before it is downgraded.

Capacity



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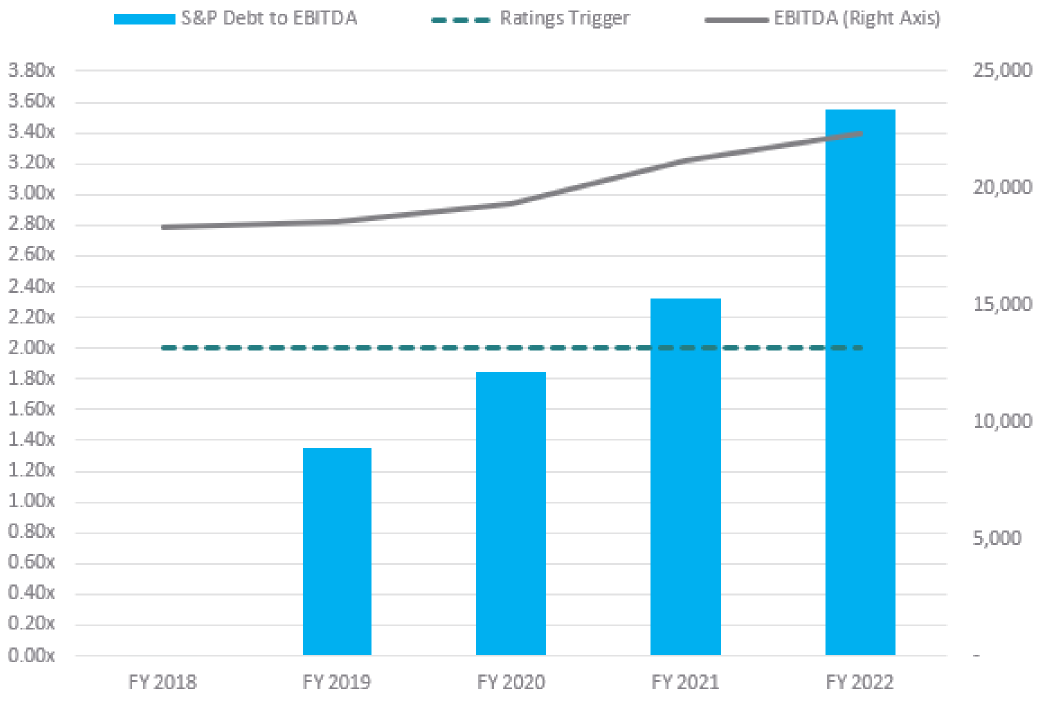


Source: Bloomberg LLC, S&P Cap IQ, Public Trust Advisors

Capital

- Capital is primarily a concern for retail borrowing which shows the borrowers level of seriousness.
  - Think the down payment on your home.

- For companies, debt investors have a senior claim to equity investors in the event of liquidation which satisfies to the capital portion of the 5 C's.

Collateral

- Debt can either be secured or unsecured which is whether the loan is secured by some form of tangible asset.
- Most IG debt is unsecured which means it is backed primarily by the company's cash flows and operations.
- If debt is secured it generally means it is backed by a tangible asset. For example, to get better loan terms, a company may put up a manufacturing plant as collateral.

Conditions

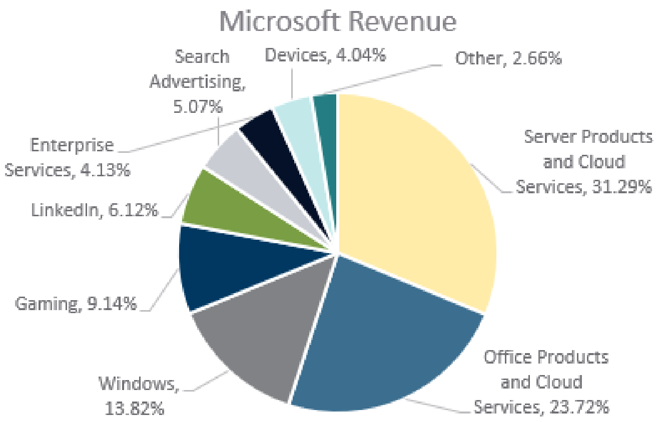
- Conditions refer to the descriptive characteristics of the loan or bond.
  - Maturity
  - Interest Rate
  - Covenants

- Typically, the more highly rated a company by the NRSROs the more favorable the borrowing terms it can get. Companies also generally must pay a higher rate to borrow for longer periods of time.

- Covenants refer to specific terms placed on a loan and are not very common in IG. These could be achieving specific financial targets or keeping leverage under a certain level.

Other Factors

- For corporates, the 5 Cs aren't the only factors we look at.
- A business' competitive environment affects credit quality.
  - Intel was recently downgraded due to an erosion of its competitive position.
- Revenue diversity is an important credit factor as well.
  - As of the end of 2021, Microsoft had a AAA rating because its revenues were more diversified. Apple did not get a AAA rating because 50% of its revenue comes from iPhone.



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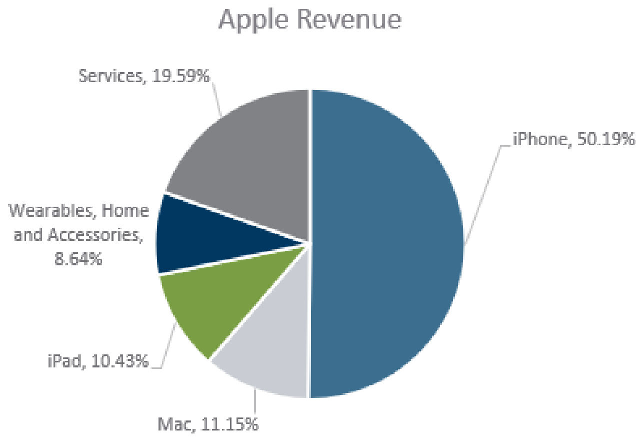


Source: Bloomberg LLC, Public Trust Advisors

Bank Credit Analysis (CAMELS)

Bank Credit Analysis (CAMELS)

- Bank's have a unique credit profile compared to corporates which requires a different approach.

- Banks utilize a strategy called "Asset Liability Matching" which means that leverage is not as important of a consideration.
  - Banks issue loans using deposits and debt, then match assets with similar time frames to those debts.

- Banks are the largest participant in the commercial paper market making them key to a successful money market investment strategy.

Bank Credit Analysis (CAMELS)

- Capital
  - The amount of equity that can absorb losses.
- Asset Quality
  - The underlying quality of the bank's loans.
- Management Strategy
- Earnings and Profitability
- Liquidity & Funding
  - The bank’s ability to meet short-term outflows and fund itself through deposits and debt.
- Sensitivity (to interest rates)

Capital

- A bank's capital is the amount of equity investment that can absorb losses. It is split into three tranches.
- Tier 1 Capital
  - Going concern capital. High quality and absorbs losses first. Absorb losses while bank is still operating normally.
- Tier 2 Capital
  - Absorbs losses after the bank is a gone concern. AKA after a bank has gone insolvent.
- Tier 3 Capital
  - Mostly market risk instruments that could absorb some loss if needed. Lowest quality of the three.

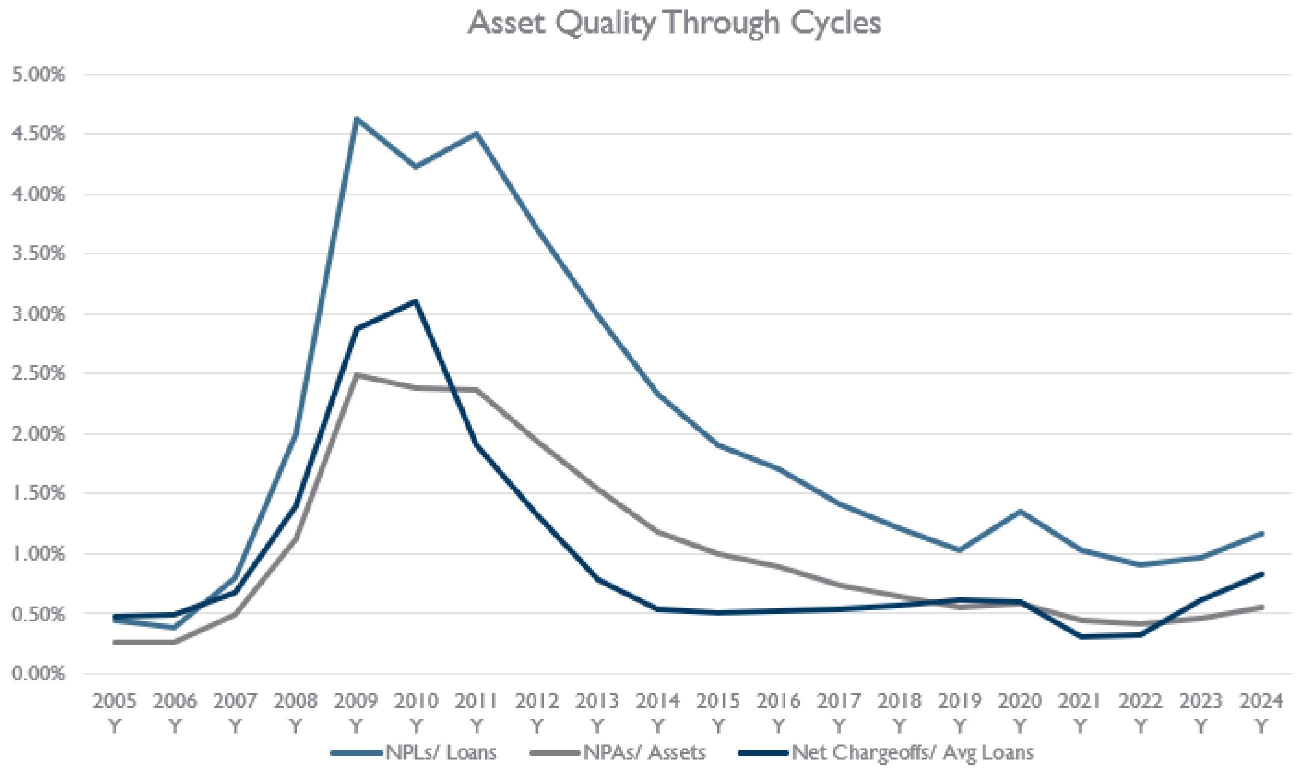
Tier 1 Capital

- Tier 1 capital is designed to protect banks and the financial system post-2008. Tier 1 capital is comprised of Common Equity Tier 1 Capital (CET1) and Additional Tier 1 Capital (AT1).

- CET1:
  - Primarily common stock ownership. This capital was introduced in 2014 and can absorb losses immediately as they occur.
  - All banks are required to keep a minimum balance of CET1 Capital that is defined by their local regulators.
- AT1:
  - Made up of non-CET1 instruments like a convertible security for example.

Asset Quality

- Asset quality measures the health of a bank's loan book.
- Usually measured by:
  - Net charge offs (NCOs): actual losses taken on loans.
  - 30,60, and 90+ day delinquencies: number of loans that are behind on payment.
  - Non-performing loans (NPLs): percentage of loans currently not being paid.
  - Non-performing assets (NPAs): are like NPLs but can include other assets like mortgage-backed securities or bonds.



Source: S&P Capital IQ Pro, Public Trust Advisors

Management Strategy

- Bank management teams generally lay out medium-term strategies and financial targets for investors.
- We benchmark management teams on their ability to consistently hit these targets and make decisions that will grow the bank.
- Compliance failures and reputational risks also fall to management and can have a significant impact on the credit quality of a bank.
    - Credit Suisse's initial fall to BBB- is an example of this.

Earnings & Profitability

- A bank's ability to consistently generate profit and keep its expenses under control through cycles is a key credit consideration.
- Banks derive revenue from interest on loans, investment banking activities, trading, wealth management, and more.
- Metrics:
  - Return on equity (ROE)
  - Return on assets (ROA)
  - Net interest margin (NIM)
  - Noninterest income/expense
  - Efficiency ratio (costs/revenue)

Liquidity & Funding

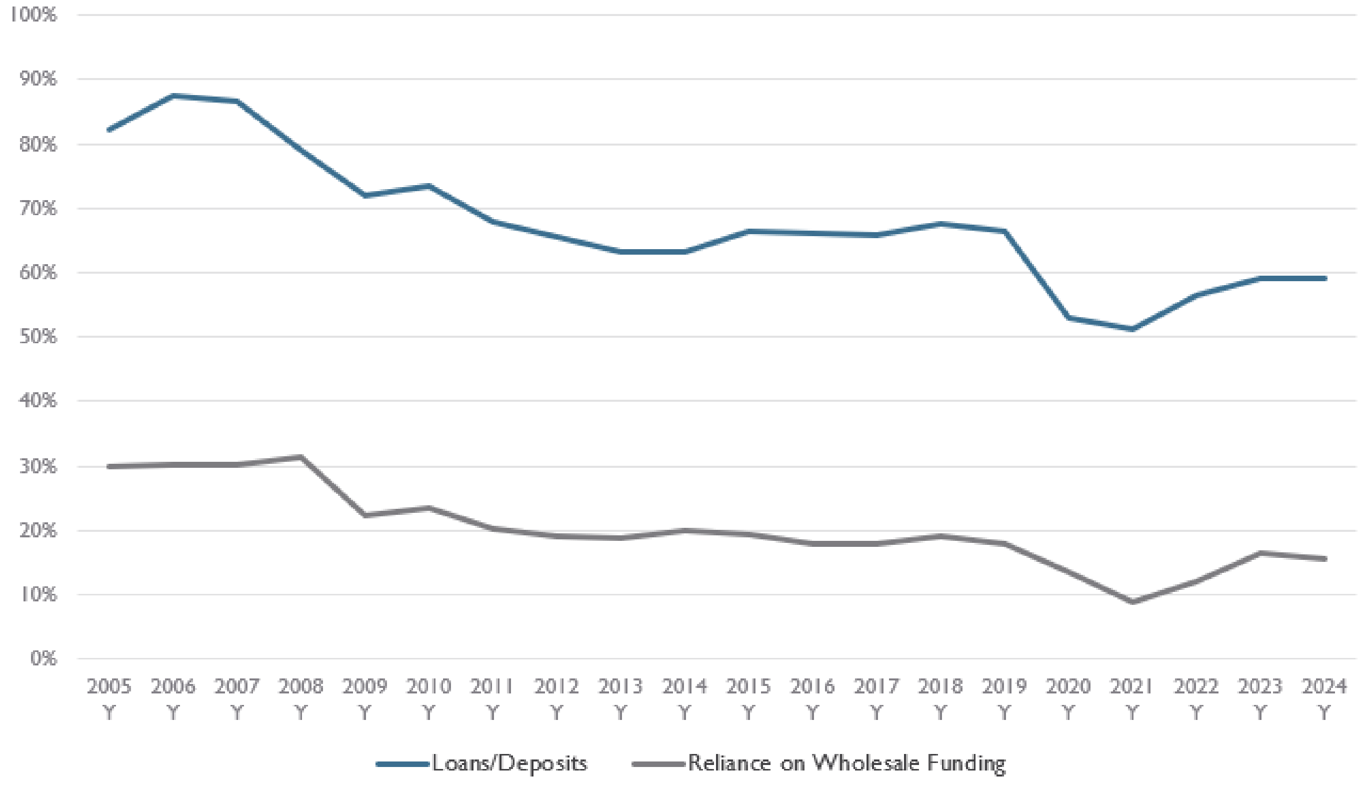
- Banks primarily fund their operations through deposits. But large banks with complex operations frequently also use wholesale funding to fill the gaps.
    - Wholesale funding is when a bank issues debt to investors which can be short-term (commercial paper) or longer-term (bonds).

- Deposits tend to be cheaper but not all operations generate deposits.

- Banks must keep enough liquid assets on hand to meet redemptions and operational expenses.
    - Liquid assets are those that can be sold/used without a substantial decrease in value.

Liquidity & Funding (cont.)

- Large U.S. Banks are flush with deposits post-pandemic but have increasingly relied on wholesale funding despite higher rates.



Source: S&P Capital IQ Pro, Public Trust Advisors

Sensitivity

- Banks earn profit from the difference between the interest they can charge on loans and the interest paid on deposits.
- Fixed rate loans lose value when rates rise/gain value when rates fall.
- Variable rate loans gain value when rates rise/lose value when rates fall.
- This can extend to the debt that the bank issues as well. How a balance sheet reacts to interest rate changes is what we call interest sensitivity.

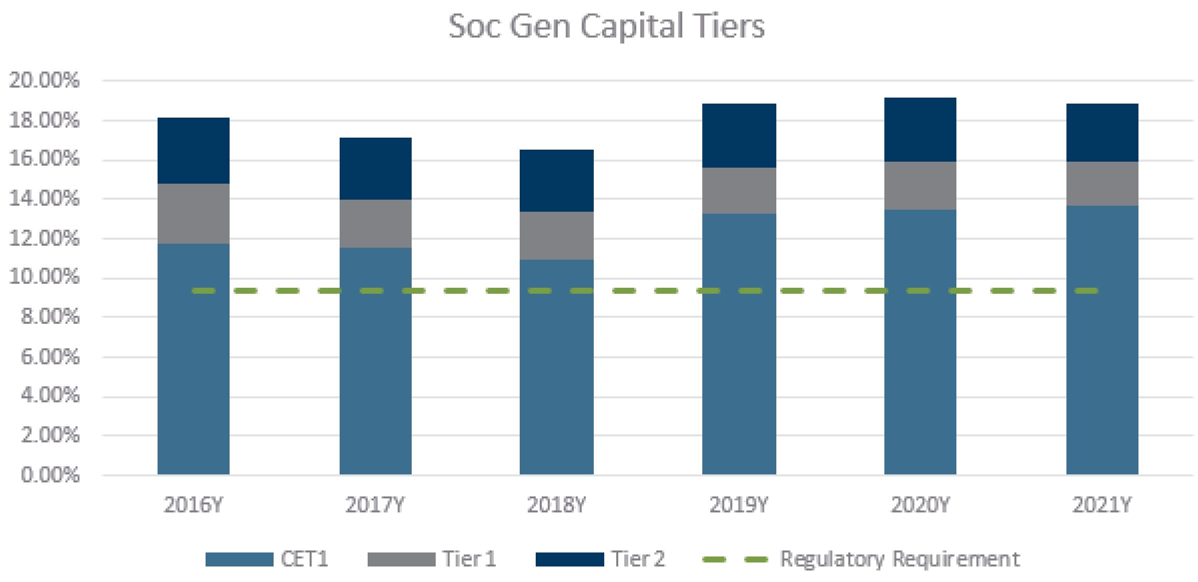
Bank Analysis Case Study: Société Générale

Capital: Société Générale (SG)

- Beginning in 2017, SG saw material declines in its capital due to operational performance and issues with subsidiaries.

- SG was forced to sell several subsidiaries to generate capital and hit managements 12% CET1 target.

- However, the capital build that occurred in 2018 did lead to a positive outlook at the rating agencies.



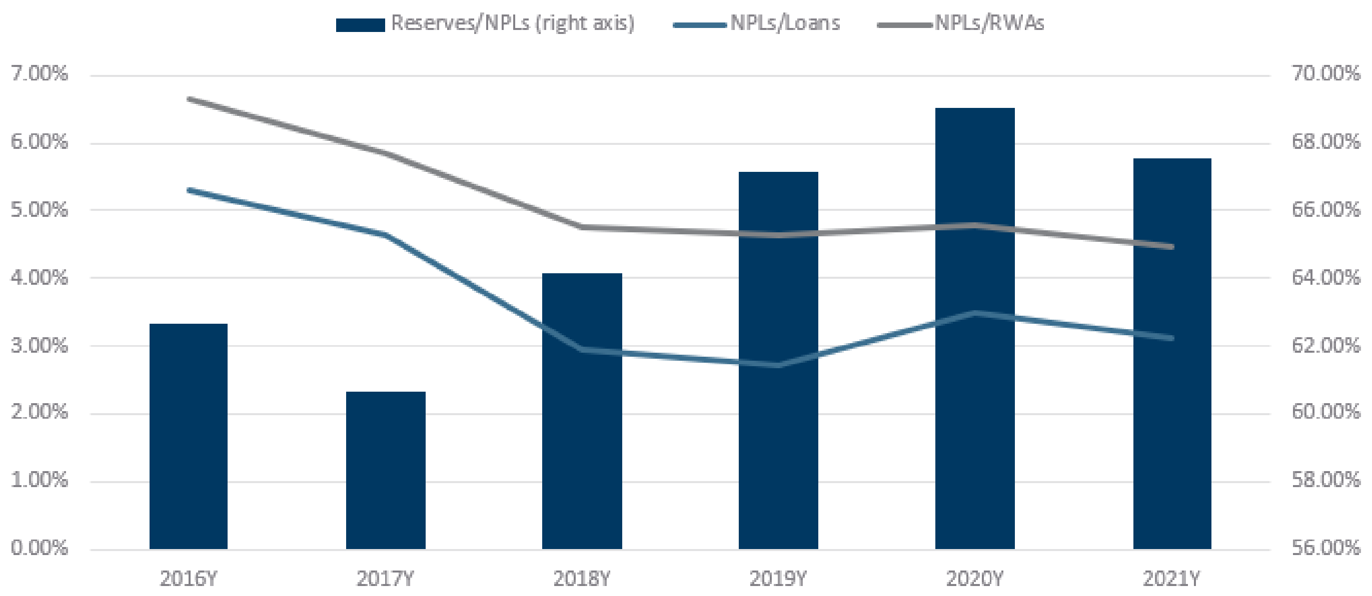
Source: S&P CapIQ Pro, Public Trust Advisors

Asset Quality: Société Générale (SG)

- Like most global banks, SG has seen its asset quality strengthen to near records.

- Improving asset quality from 2016 to 2019 helped the bank to stave off downgrade while its capital balance declined.

- However, the increase in NPLs during 2020 (because of the pandemic) led to higher provisions and a negative outlook at the rating agencies.



Source: S&P Capital IQ Pro, Public Trust Advisors

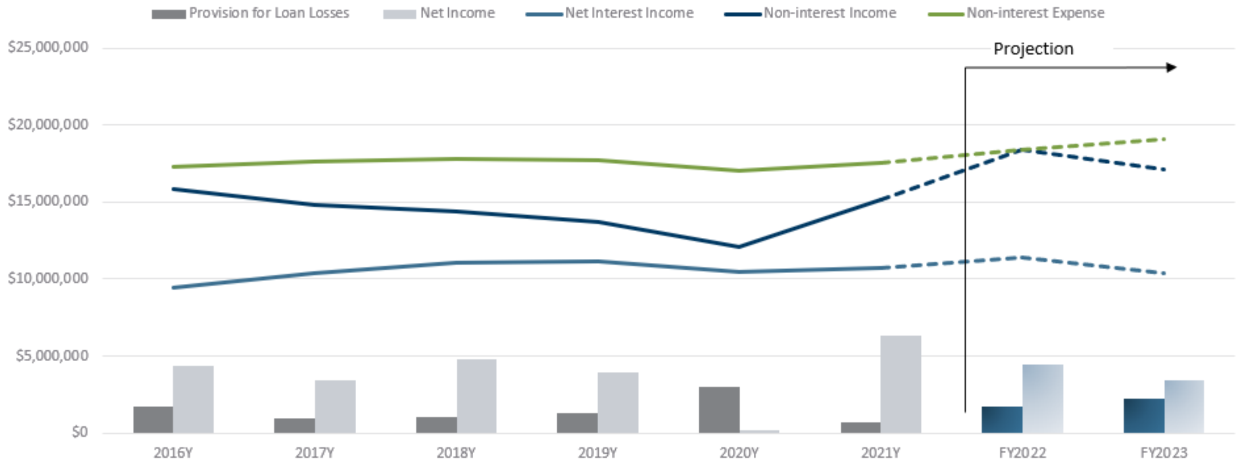
Management Strategy: Société Générale (SG)

- SG's management has undergone a three-year restructuring plan that focused on cutting costs, scaling back capital markets activity, and exiting high-risk geographies.

- Execution of the three-year plan has led to better capital levels and more predictable financial performance.

Earnings and Profitability: Société Générale (SG)

- COVID hit SG particularly hard, and the bank nearly took a loss in 2020.
- Since then, we have seen the bank bounce back strongly, and its restructuring plan has led to a positive trajectory on earnings and expenses.



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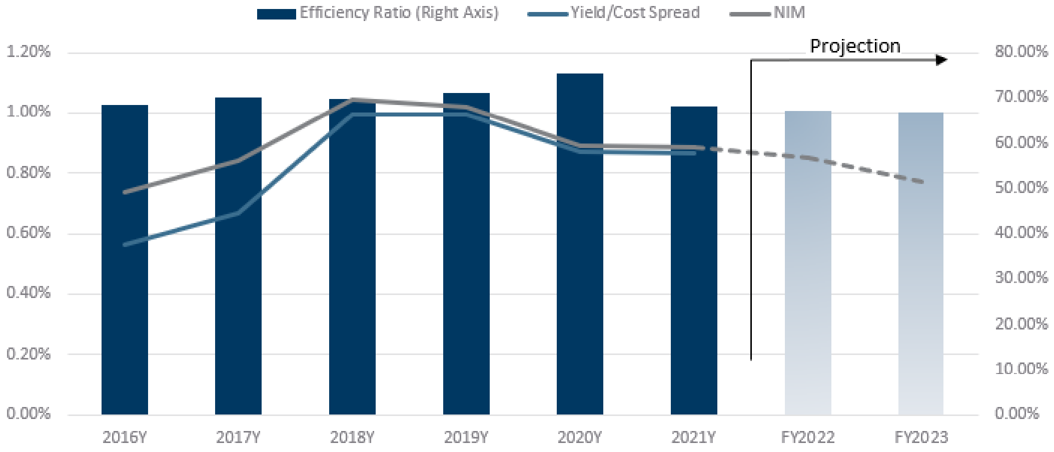
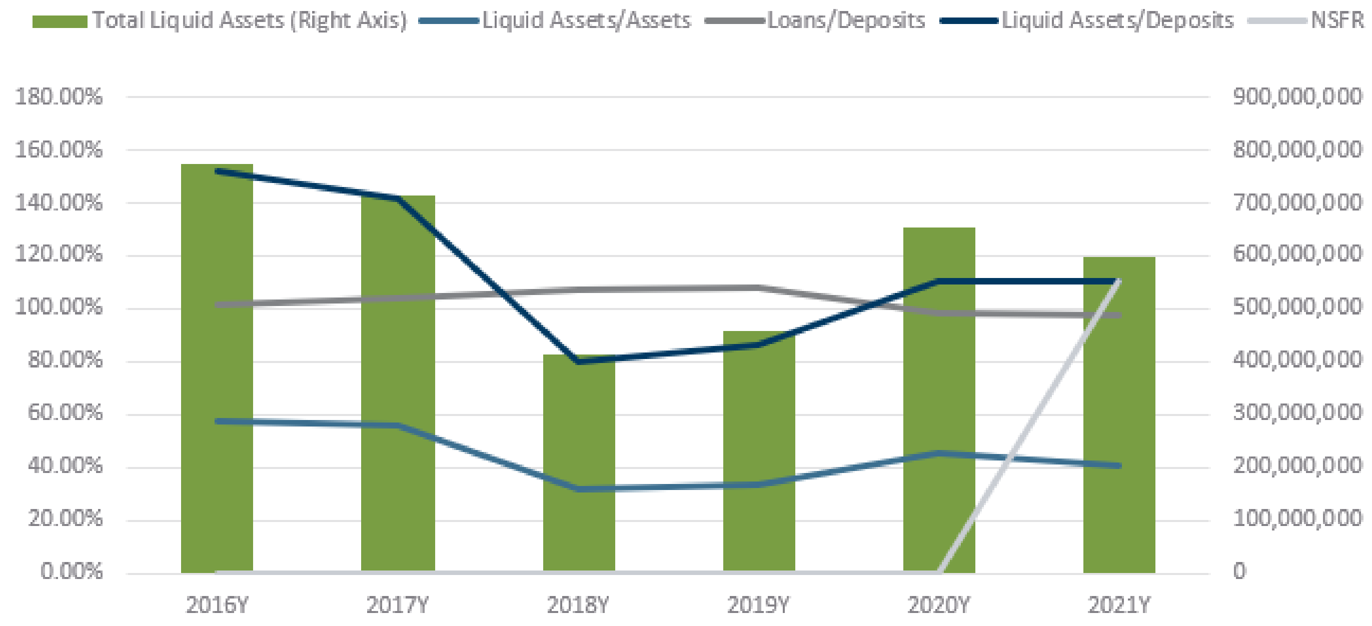


Source: S&P Capital IQ Pro, Public Trust Advisors

Liquidity & Funding: Société Générale (SG)

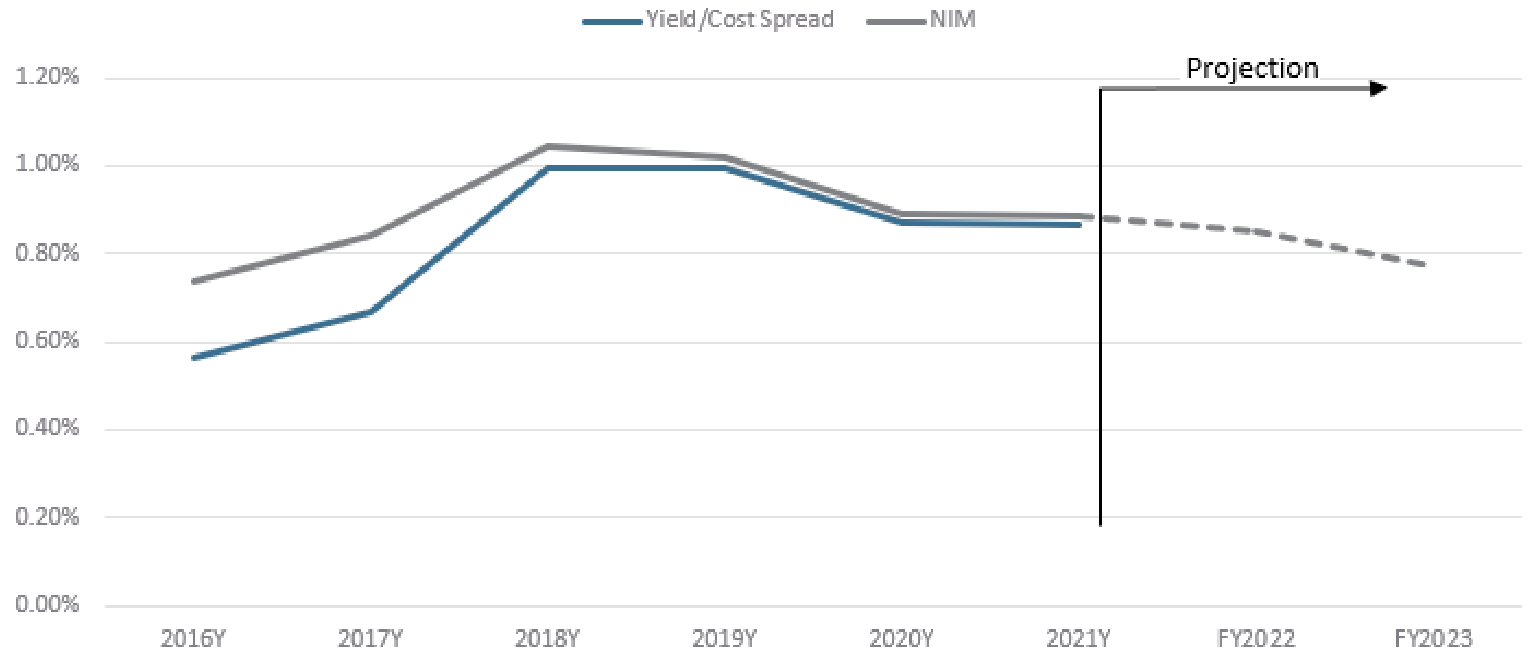
- SG has historically lent more than its deposit balance, but the influx of deposits during the pandemic changed that. This has made the bank less reliant on market funding.
- Banks are now required to report a Net Stable Funding Ratio which measures how stable and liquid the banks funding is.



Source: S&P Capital IQ Pro, Public Trust Advisors

Interest Sensitivity: Société Générale (SG)

- Because SG has a higher reliance on noninterest income, it is less sensitive to changes in interest rates.
- This lower sensitivity means that it does not benefit as much from rising rates, and its revenues are more closely tied to financial markets than central bank policies and rates.

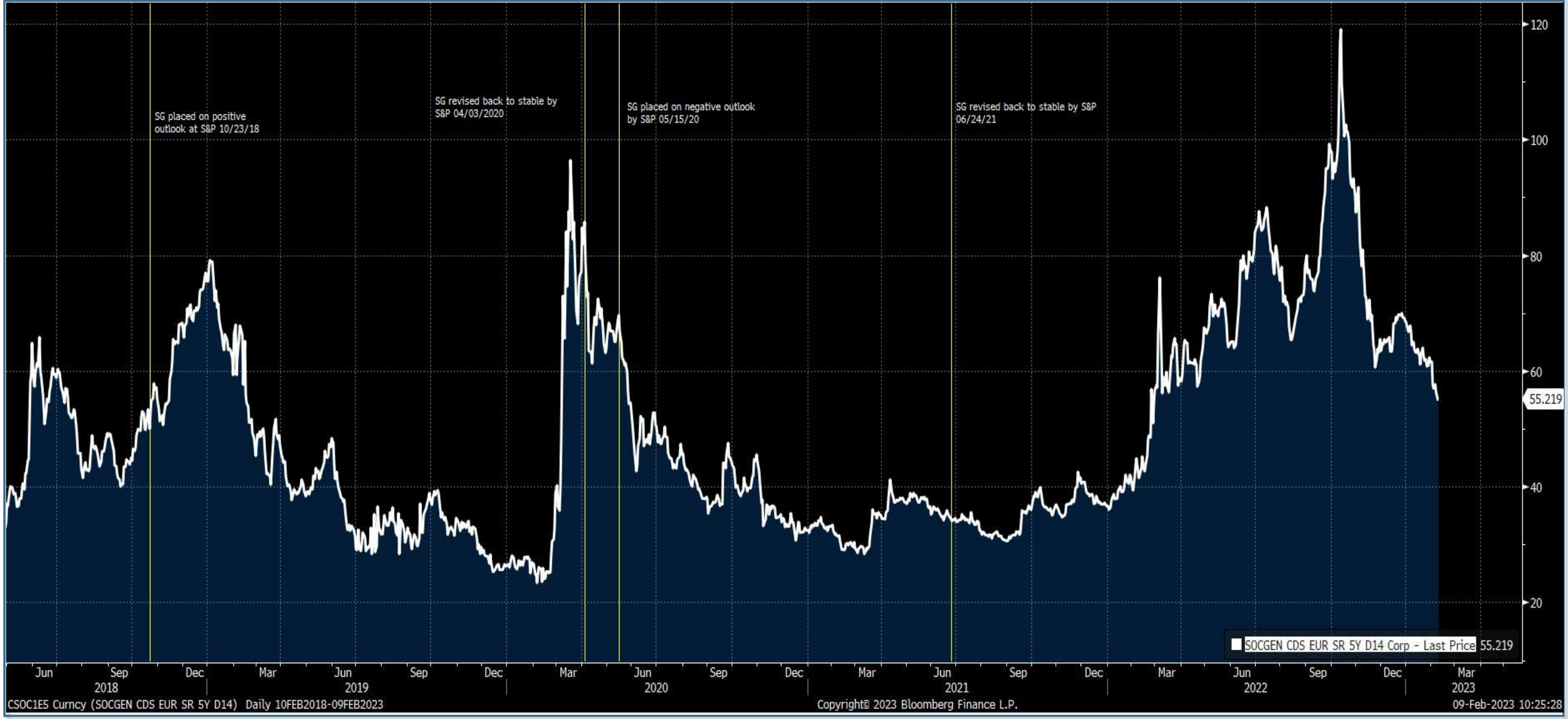


Source: S&P Capital IQ Pro, Public Trust Advisors

Fundamental vs. Market Based Credit Analysis

- Some managers use market-based credit analysis in conjunction with ratings.
- Most market-based approaches look at the spreads on credit default swaps (CDS) to determine how the market feels about a company's debt.
- Increases in CDS spreads indicate that a company may have weakening credit quality, and decreases can indicate a company has improving credit quality.
- There is a lot of noise in CDS spreads though, and it can be tough to determine what is material and what isn't.

Fundamental vs. Market Based Credit Analysis



Conclusion

Conclusion

- Fundamental credit analysis is a framework that looks at a company from a wholistic perspective to judge its credit quality.
- It seeks to analyze trends in operating performance to stay ahead of rating agency actions and credit events.
- Corporates utilize a framework based on the 5 C's and are focused on business operations, capacity for additional debt, use of cash, and competitive environment.
- Banks utilize a framework that's based on capital, asset quality, profitability, liquidity, and interest sensitivity.
- Market approaches can provide insight but can move opposite or lag real actions.

Questions?

APPENDIX: MONEY MARKET CREDIT INVESTMENTS

COMMERCIAL PAPER

COMMERCIAL PAPER (CP)

- CP is essentially an unsecured promissory note issued for a specific dollar amount and maturity date. It is considered extremely safe & issued by very high-quality counterparties. Primary risk is related to issuer performance.
- Unsecured and relatively inexpensive source of short-term cash and bridge financing. Highly liquid market enable issuers to easily roll balances, thereby becoming a source of consistent financing
- CP is a discount security, meaning the security pays no interest and the investor purchases at a price less than par and receives face value at maturity. Typically offers ~10-20bps more than T-bills.
- Issues are in large denominations ($100K+) and are sold directly by the issuer to either primary market or the investor.

ASSET-BACKED COMMERCIAL PAPER (ABCP)

ASSET-BACKED CP (ABCP)

- ABCP is issued by high-grade issuers, typically generates yields above treasuries in a flexible range of maturities, and provides exposure to diverse asset classes (i.e. auto loans, receivables, credit card balances).
- Additional spread is the "complexity premium"
- Issuers are by bankruptcy remote entities called "conduits", which may be fully or partially backed by a sponsoring bank. The ABCP conduit structure inherently reduces risk, resulting in credit risk approximately akin to CDs.
- Exempt from SEC registration which is more costly and takes time for approval.
- Primary risk is systemic.

CERTIFICATES OF DEPOSIT

CERTIFICATES OF DEPOSIT (CD/YCD)

- CDs are time deposits issued electronically by domestic banks for a stated term providing interest reflecting both a small maturity premium and an illiquidity premium.
- CDs are insured by the Federal Deposit Insurance Corporation (FDIC) and the National Credit Union Administration (NCUA) for amounts equal to or below $250,000. These may be available to institutions through brokered CD structures.
- Yankee CDs (YCDs) are negotiable CDs issued by the U.S. based branch of a foreign bank in US dollars. YCDs generally provide greater yield than domestic CDs, but do not receive FDIC backing.
  - Foreign banks issue YCDs to increase their dollar reserves and grow their asset base

REPURCHASE AGREEMENT

REPURCHASE AGREEMENT (REPO)

- Repo are short-term borrowing agreements wherein securities are loaned to a counterparty with a guaranteed repurchase at a future date for a stated price. The repo rate is the difference between the original sale and promised repurchase price.

- General collateral (GC) enables counterparties to transact swiftly with high-quality collateral identified after settlement.

  - GC may be either traditional or non-traditional. Traditional repo risk is equal to that of the underlying assets. Non-traditional repo risk is related to both the assets and the counterparty.

	TRADITIONAL	NON-TRADITIONAL
Key Details	• Consists of all liquid U.S. Government Securities • No maturity limitation on the collateral	• Collateral other than U.S. Government Securities • No maturity limitation on the collateral
Eligible Collateral Examples	• U.S. Treasuries • U.S. Agency Securities • U.S. Agency MBS	• Commercial Paper • Corporate Bonds • Convertible Bonds • Municipal Bonds • Structured Products • Money Market Securities • Equities

Source: Morgan Stanley Investment Management